DRAFT

Installation Management Agency Guidance

Inventory Management

Hazardous Material Management Program (HMMP) Procedures

Headquarters
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Hazardous Material Management Program (HMMP) Business Practices (Required) Guidance

1 General.

It is the Installation Management Agency (IMA) policy that installations establish standardized and centralized hazardous material (HM) and hazardous waste (HW) business practices that reduce and prevent pollution by controlling and reducing the acquisition, use, handling and disposition of HM and generation of HW. Specific centralized hazardous material and waste management objectives include:

- Enhanced readiness
- Reduction of deployment footprint
- Standardized operations
- Life-cycle asset visibility
- Integration of environmental and industrial hygiene requirements into supply operations
- Reduction in Toxic Release Inventory (TRI) releases
- Reduction in selected Environmental Protection Agency (EPA) priority chemicals
- Reduction in HM acquisition, accompanied by reductions in costs and facilities
- Reduction of HW generation and costs
- Reduced HM exposure
- Enhanced pollution prevention opportunity assessments
- Enhanced compliance
- 100% electronic Emergency Planning and Community Right-to-Know Act (EPCRA)313 reporting

Centralized management is focused upon and is driven by environmental impacts and safety of personnel and is integrated into all day-to-day business functions. The fundamental practice of the HMMP is to minimize, track, and control the ordering, storing, distribution, using and disposition of hazardous materials through effective use of pre-authorizations and single-point control. It also facilitates tracking of HW wastes from generation to final disposal and the charge-back of waste processing costs to the generator. Essential to the Program is the requirement to track HM at the chemical constituent level and the use of an automated tool to facilitate tracking and reporting.

Outside of the Continental United States (OCONUS) IMA regions have the primary requirement to meet final governing standards (FGS) and treaty requirements. IMA HMMP policy is supplemental to FGS requirements, and not meant to replace them. However, every attempt should be made to implement HMMP business practices within the parameters of FGS and other treaty or host-nation requirements that affect what or how a HM or HW is managed and/or tracked. Where specified business practices cannot be implemented by an OCONUS activity, the IMA Region will implement an organization and practice with similar intent and results. OCONUS IMA Regions may request exemptions to HQ IMA policy. IMA requirements that conflict with FGS requirements will be immediately reported to HQ IMA for review and appropriate action.

This guidance provides minimum best business practices that, when integrated into base operations services, will facilitate achieving HMMP objectives and metrics to measure the success of the program. Each practice is linked to the appropriate IMA Service Standard.

In conformance with the Army goal to integrate HMMP into the Single Army Logistics Enterprise (SALE), IMA envisions the phased integration of environmental, safety, health and logistics requirements into the following business practices. Phase 1 includes those modified business practices that can be readily implemented with minimal resources and automated capability.

1.1 References.

Required and related publications with prescribed and referenced forms are listed in Appendix A.

1.2 Explanation of Abbreviations and Terms.

Abbreviations and special terms used in this regulation are explained in the consolidated glossary, at Appendix B.

2 Responsibilities.

2.1 Headquarters, U.S. Army Installation Management Agency (IMA).

IMA is responsible for:

- Implementing Headquarters, Department of the Army (HQDA) HMMP policy.
- Conduct limited quality assurance/quality control (QA/QC) of installation/region project submissions and release to the U.S. Army Environmental Center (USAEC).
- Distributing allocated resources.
- Reviewing and modifying environmental reporting exemption requests to ensure accurate public reporting from Army installations.
- Collecting electronic HMMP information for assessment and trend identification.

2.2 Installation Management Agency (IMA) Regions.

IMA Regions are responsible for:

- Implementing HQDA, IMA HQ, HMMP Policy.
- Establishing policy to control use of Government Purchase Cards (GPC) for HM procurement.
- Providing functional and technical automated systems support to installations.
- Exercising regional oversight of Army installation HM management operations.
- Serving as advocate for installation HMMP resource requirements.
- Participating in the development of long range Department of Defense (DOD) and Army installation HMMP efforts.
- Incorporating HMMP requirements into existing self-assessment practices, planning and training.
- Participating in periodic HQDA staff visits to assure compatibility of installation HMMP operations with HQDA policy.
- Coordinating and responding to installation HMMP policy related recommendations, suggestions, and inquiries from the field.
- Collecting, collating, reviewing and forwarding HMMP management and EPCRA compliance reports, as required.

2.3 Garrison Commanders.

Garrison Commanders are responsible for:

- Establishing and executing installation HMMP in accordance with HQDA policy and guidance (e.g. Environmental Management System [EMS]). Army National Guard (ARNG) State Area Commands (STARCs) establish and execute HMMPs consistent with HQDA and National Guard Bureau (NGB) policy. STARCs implement NGB policy and establish command HMMP policy consistent with NBG policy, including establishment of an Authorized Use/User List (AUL), a recycling program and day-to-day operational responsibilities for centralized HM management, tracking, and reporting.
- Assigning HMMP responsibilities.
- Establishing installation centralized HM management responsibilities in accordance with HQDA policy.
- Chartering an HMMP committee or incorporating HMMP requirements into Environmental Quality Control Committees (EQCCs). STARCs

incorporate HMMP responsibilities into existing EQCCs.
- Consolidate, verify and submit projects to IMA Regions (NGB for STARCs).
- Integrating central HM control business practices into supply activities in accordance with HQDA policy or NGB policy (STARCs).
- Assigning day to day HMMP operational control responsibilities, including centralized HM control point responsibilities.
- Assigning automation infrastructure responsibilities.
- Establishing policy to control use of GPC for HM procurement.
- Establishing and maintaining an installation recycling/reuse program.
- Managing installation automated systems.
- Conducting mandatory and ad hoc electronic environmental and pollution prevention act reporting.
- Integrating HMMP requirements into command supply management reviews.
- Conducting installation-wide HMMP Self-Assessments.
- Incorporating HMMP requirements into host-tenant agreements.

2.4 OCONUS Garrisons .

OCONUS Garrisons are responsible for:
- Establishing and executing a Garrison HMMP in accordance with FGS, and HQDA and IMA region policy and guidance.
- Assigning Garrison HMMP responsibilities.
- Establishing Garrison centralized HM management responsibilities in accordance with HQDA and IMA regional policy..
- Chartering an HMMP committee.
- Assigning day to day HMMP operational control responsibilities
- Assigning automation infrastructure responsibilities
- Establishing and maintaining a Garrison recycling/reuse program.
- Conducting ad hoc electronic environmental and pollution prevention act reporting, as required.
- Integrating HMMP requirements into command supply management reviews.
- Conducting ASG-wide HMMP Self-Assessments.

2.5 Directorate of Public Works (DPW).

The DPW is responsible for:
- Ensuring full integration of environmental and safety requirements into day-to-day operations, as defined in HQDA policy, the installation HMMP, and regulatory requirements.
- Ensuring full integration of the HMMP into DPW planning.
- Participating in the HMMP Committee.
- Establishing centralized HM procedures in DPW supply, self-help and family housing operations.
- Ensuring that support contracts include clauses requiring the approval and tracking of HM used and HW generated on the installation/facility.
- Integrating recycling programs into HMMP.
- Integrating HMMP responsibilities into personnel job descriptions, as required.
- Ensuring that personnel authorized to receive, return and/or use HM are identified in the HMMP database.
- Ensuring that DPW industrial processes that use HM or generate HW are accurately identified and described in the HMMP database.
- Ensuring that HM used in DPW operations has been reviewed, approved, and recorded in the HMMP database.
- Ensuring that all HM receipts and usage are reported in accordance with approved HMMP policy and procedures.
- Assisting the Environmental, Safety, Industrial Health (IH)/Occupational Health (OH) and DOL offices in conducting material substitution to identify less hazardous materials for use on the installation.

2.6 Environmental Offices and Divisions.

The Environmental Office or Divisions is responsible for:

- Providing HMMP staff support to the Garrison Commander (STARC for ARNG).
- Conducting environmental and pollution prevention planning, including establishing policy and procedures for the installation HMMP, consistent with HQDA policy and guidance.
- Establishing local pollution prevention goals and objectives consistent with HQDA guidance (NGB guidance for ARNG).
- Conducting pollution prevention assessments to identify opportunities for enhancing pollution prevention efforts and to measure goal achievement.
- Assisting activities in identifying less-hazardous product substitution.
- Participating in the HMMP Committee.
- Integrating Resource Conservation and Recovery Act (RCRA) HW operational information into the HMMP, to include collection, disposal, and recycling of HW.
- Providing hazardous material and chemical inventory information to applicable activities, as required.
- Preparing compliance, command, and ad hoc HS management reports, as required.
- Conducting scheduled and unscheduled self-assessment HMMP environmental inspections, audits and assistance visits. Conducts visits unilaterally and/or jointly with other offices.
- Conducting or assists in hazard waste handling training for installation personnel.
- Coordinating recommendations for HMMP business practice improvements.
- Conducting mandatory and ad hoc environmental reporting.

2.7 Directors of Logistics (DOL).

The DOL is responsible for:

- Ensuring full integration of environmental and safety requirements into logistic operations and planning, including transportation, as defined in HQDA policy, the installation HMMP, and regulatory requirements.
- Participating in the HMMP Committee.
- Participating in installation reviews of HM.
- Integrating recycling programs into HMMP.
- Integrating HMMP responsibilities into personnel job descriptions, as required.
- Ensuring that personnel authorized to receive, return and/or use HM are identified in the HMMP database.
- Ensuring that DOL industrial processes that use HM or generate HW are accurately identified and described in the HMMP database.
- Ensuring that HM used in DOL operations has been reviewed, approved, and recorded in the HMMP database.
- Assisting the Environmental, Safety, and IH offices in conducting material substitution to identify less hazardous materials for use on the installation.
- Ensuring that support contracts include clauses requiring the approval and tracking of HM used and HW generated on the installation.
- Ensuring that HM used in DPW operations has been reviewed, approved, and recorded in the HMMP database.
- Ensuring that all HM receipts and usage are reported in accordance with approved HMMP policy and procedures.

2.8 Garrison Safety Office/Officers.

The Garrison Safety Office/Officer is responsible for:

- Providing Safety staff support to the Garrison Commander.
- Serving on the HMMP Committee.

- Ensuring full integration of HMMP policy and requirements into installation Safety and Occupational Health planning, as required.
- Establishing safety policy and procedures applicable to hazardous substances, including:
  - Identification of processes and personnel using HM;
  - Maintaining and keeping updated manufacturer's or Hazardous Materials Information Resource System (HMIRS) Material Safety Data Sheet (MSDS); and
  - Providing MSDS information to the Public Safety Fire Department, as required.
- Conducting Safety, IH and OH assessments to identify opportunities for enhancing safety efforts and reducing risks to installation personnel. Assessments may be conducted jointly with the Environmental Office and/or IH Office.
- Participating in AUL change approvals.
- Participating in installation audits and assistance visits. Include identification and reporting of HM found but not in the AUL or centralized database.
- Conducting or assisting in hazard communication training for installation personnel.

2.9 The Director of Public Safety Fire Department.

The Director of Public Safety Fire Department is responsible for:

- Participating in the Garrison HMMP Committee.
- Providing policy and guidance on first response and fire-related issues as they pertain to hazardous materials and hazardous waste.

2.10 Industrial Hygiene (IH) Office.

The IH is responsible for:

- Providing policy and guidance and staff level support on all IH issues, as they pertain to processes using hazardous materials and/or generating hazardous wastes.
- Ensuring full integration of HMMP policy and requirements into installation IH planning and assistance or inspection visits.
- Participating in the Garrison HMMP Committee.
- Participating in the review and approval of new hazardous materials or processes that use these materials or generate hazardous wastes.
- Assisting Garrison units and activities in properly defining processes and in identifying necessary training and protective equipment.
- Coordinating with the Environmental and Safety Offices during the conduct of pollution prevention opportunity assessments.

2.11 Director for Information Management (DOIM).

The DOIM is responsible for:

- Ensuring adequate automation infrastructure and maintenance to support efficient HMMP operations, as required.
- Participating in the garrison HMMP Committee.

2.12 HMMP Committee.

The Command, Garrison, or ASG HMMP Committee or ARNG EQCC is responsible for:

- Serving as the HMMP implementation workgroup and oversight committee. Develops the implementation plan for HMMP implementation; assigning roles and responsibilities; identifying and assigning actions with necessary milestones; and ensuring milestones are satisfactorily completed. Is responsible for the integrated efforts necessary to successfully implement enhanced HMMP business practices on the installation. The Garrison Commander or designee chairs the Committee.

- Providing oversight to HMMP operations and briefs the EQCC and Garrison Commander, as required.
- Pre-authorizing HM prior to first-time ordering;
- Conducting periodic in-progress review (IPR) briefings on the status of HMMP implementation and ongoing operations.
- Representing all tenant activities, Base Operations and/or DPW Supply, Base Operations Maintenance, Safety Office, and DOIM. The Garrison Commander adjusts membership, as required.
- Providing contract clauses in accordance with the Defense Federal Acquisition Regulation Supplement (DFARS) to the Contracting Office requiring the identification, approval, and tracking of HM and HW for all work conducted on the installation and provision of specific Material Safety Data Sheets prior to work commencement.

2.13 Garrison and Army Reserve Facility Centralized HM Control Points.[1]

Garrison Centralized HM Control Points are responsible for:

- Centrally managing HM as an integral part of the supply mission.
- Acting as the sole source of HM to installation activities, unless exempted by the HMMP Committee. Centralized HM Control Points use "just-in-time" procurement to the extent possible, using local purchase procedures.
- Ordering, receiving, issuing and tracking HM by the unit of use to the extent practical and -possible.
- Establishing a Requisitioning Objective (RO) and Reorder Points (ROP) for each HM required to be stocked.
- Maintaining accurate HM inventory information at the product and chemical composition levels from point of receipt through disposition.
- Ensuring HMIRS or manufacturer's Material Safety Data Sheets (MSDSs) are available
- Documenting all HM transactions, ensuring accurate product identification at the chemical composition level, using manufacturer MSDS information. This facilitates real time chemical inventory information for compliance reporting and emergency response requirements.
- Issuing requested HM within established timeframes. The goal is to issue non-perishable HM within a specific amount of time as specified by the HMMP Committee.
- Recording actual HM usage and disposition at the product and chemical constituent levels;
- Establishing a HM re-use capability, consistent with special material requirements.
- Participating in the installation HMMP Committee or EQCC (ARNG).
- Ensuring that personnel receive HM/HW handling and management training,
- Ensuring that the HM Control Point spill plans are prepared and available for emergency response and are reviewed and updated at least annually.
- Providing necessary HM product and chemical information to the installation Environmental, Safety, and Public Health/Safety Offices to meet compliance, safety, command and ad-hoc reporting requirements.

2.14 The Directorate of Contracting (DOC).

The DOC is responsible for:

- Establishing contract mechanisms with local vendors to meet customer

[1] Centralized HM Control Points are often referred to as HAZMARTs, Hazardous Material Control Points, Pharmacies, or other local terms. The intent is to incorporate HMMP business practices into existing supply activities, rather than establishing parallel or stovepipe supply activities for HM. Small Army Reserve not physically located on or directly supported by an installation, establish HMMP business practices within existing supply operations. ARNG units and activities are not normally directly supported by an installation Centralized HM Control Point, but provide HM information as required.

requirements for local purchase HM items. Delivery will be to the installation HM Control Point, which will then issue and track the procured hazardous material to the Garrison customer.

- Reviewing all contracts to ensure that contractor provided HM is consistent with HMMP policy and to require contractor HM to be tracked throughout its life cycle on the installation.
- Establishing policy limiting the use of IMPAC cards for HM to the HM Control Point or for urgent requirements.
- Participating in the garrison HMMP Committee.
- Requiring contractors working on an installation to provide MSDS information to the HM Control Point for all HM that will be brought on the installation.
- Requiring all contractors to report HM usage and HW generated on the installation.

2.15 Garrison Activity Chiefs, Mission Commanders, Tenants Supported By The Garrison and ARNG units and facilities.

Unit Commanders, Activity Chiefs, Tenants, and ARNG Units and Facilities are responsible for:

- Implementing higher headquarters HMMP policy (ARNG units implement NGB policy).
- Exercising oversight and direction over the management, use and tracking of HM in the possession of mission units and activities.
- Ensuring that all processes, HM, and waste streams have been approved and incorporated into the installation AUL to allow expeditious HM transactions. Technical and Field Manuals and Lube Orders are the key source of processes and material used by an activity. Incorporate all unit loads HM in the AUL. ARNG information is incorporated into the STARC database.
- Implementing HMMP business practices into day-to-day operations.
- Ordering HM by unit of use to the extent possible. For example, if a shop conducts oil changes that normally use 5 quarts at a time, order oil by the quart or 5-quart container, rather than 55-gallon drum.
- Ensuring the establishment of maximum shop/lab supply levels for HM normally used in day-to-day business.
- Ensuring that HM in excess of the maximum stock level or in excess of known immediate needs is returned to the HM Control Point for re-use. This includes open or closed containers of useable materials. Not applicable to ARNG units and facilities.
- Obtaining all HM through the HM Control Point. ARNG units and facilities obtain HM using NGB procedures.
- Reporting actual HM usage to the HM Control Point as coordinated with the HM Control Point.
- Ensuring that work areas and laboratories maintain correct manufacturer or HMIRS MSDSs for each HM used and/or stored.
- Designating, in writing, those personnel authorized to request, receive, and store HM.
- Obtaining and marking appropriate containers for collecting used HM.
- Coordinating the turn-in of unserviceable HM with the HW Office, in accordance with installation HW procedures.
- Designating, in writing, those personnel authorized to coordinate and turn-in HW. .
- Ensuring that all personnel exposed to HS in the course of their work receive proper training and ensure that proper and adequate personnel protective equipment (PPE) is stocked, maintained and issued to personnel.
- Coordinating environmental and safety training with the respective Environmental and/or Safety Office.
- Ensuring that all personnel are made aware of and comply with the Army, installation, and STARC HMMP policies and procedures.

- Providing representation to the installation HMMP Committee, as directed by the installation (STARC for ARNG) commander.
- Inspecting work areas to ensure HM has been issued through the HM Control Point (tracked through the Control Point for ARNG), that HM is properly rotated and stored; and that used HM is properly marked, in accordance with installation, STARC, and activity guidance.
- Ensuring that spill plans are prepared, approved, and available for emergency response and are reviewed and updated at least annually.
- Ensuring that appropriate spill response materials are on hand.

2.16 Individual Military and Civilians Handling and Using Hazardous Substances.

Personnel handling and Using HM are responsible for:

- Seeking appropriate training when tasks include handling of HM.
- Ensuring that manufacturer's MSDSs are on-hand and in the workplace (electronic and hard copy) for all HM used or on-hand. Being familiar with potential hazards associated with each HM used or on hand.
- Wearing appropriate PPE when handling HM. Refer to the MSDSs, product labels, technical manuals and/or the installation Safety Office for guidance. Individuals should also ensure that PPE is maintained in accordance with applicable technical documents.
- Handling HM in accordance with MSDS and product labels.
- Storing HM in accordance with Army and installation guidance and procedures.
- Placing used HM and HW in properly marked containers.
- Ensuring proper disposition of HW
- Notifying supervisors and section chiefs when new processes or materials are required and/or when new waste streams will be generated.
- Containing and cleaning up all spills immediately and report the spill to supervisors. For spills too large or those that pose a safety or health threat to personnel or the environment, immediately notify the Fire Department and Environmental Office. Consult individual activity spill plans for more details.

3 Standard HMMP Business Practices.

3.1 Establish procedures for centralized management and visibility of hazardous material throughout their life cycles on the installation.

Under Base Operations Service Number 91, Installation Management, installations shall establish a HMMP that includes garrison policy, guidance and procedures for establishing centralized management and visibility of HM throughout their life cycle on the installation. The policy, guidance and procedures apply to all garrison and tenant activities and units. Installations will publish local policy and procedures consistent with IMA guidance and federal, state and local regulations. Centralized management and visibility of HM facilitates reduction of HM procurement and use, enhanced readiness and compliance, and reduced risk to personnel and the environment. Local policy and procedures may include special instructions for Morale, Welfare and Recreation (MWR), Army and Air Force Exchange Service (AAFES) and Commissary activities. Centralized operations will be integrated into existing garrison supply operations.

- Local policy and guidance will be written and include, as a minimum:
- Organization
- Responsibilities
- Centralized HM day-to-day operational concept and standard operating procedures
- Government credit card guidance

This business practice can be implemented in its entirety in phase 1.

3.2 Create a HMMP Committee (Committee)

Under Base Operations Service Number 91, installations will establish an HMMP Committee to assist in developing and maintaining centralized HMMP policy, guidance and business practices and in providing program oversight. The Committee assists the Garrison Commander by identifying resources required to successfully implement the HMMP, for developing evaluation criteria to measure the success of the installation program and by establishing criteria for management of HM. Unresolved issues are forwarded to the Installation or OCONUS IMA Region Commander or designee. The Committee's responsibilities can be assigned to a separately chartered committee, to the garrison Environmental Quality Control Committee (EQCC) or to an EQCC sub-committee. The Committee is chaired by the Garrison Commander, who determines membership. Minimum Committee membership includes:

- Environmental Office
- Directorate of Logistics (DOL)
- Safety Office
- Industrial Hygiene (IH) Office
- Directorate of Public Works (Operations)
- HM Control Point
- Tenant Units and Activities

This business practice can be implemented in its entirety in phase 1.

3.3 Establish local Authorized Use/User Lists (AUL) to identify approved processes and control HM used in the processes.

Under Base Operations Service Numbers 91, 24 (Retail Supply) and 95 (Installation Safety and Occupational Health), installations will establish an AUL to control acquisition, identify types of HM usage, estimate HW generation, prepare environmental reporting, and as a pollution prevention tool. HM transactions will be validated against the AUL prior to procurement, issue and return. Un-validated requests should result in a review and AUL decision before proceeding.

Establishing and maintaining AULs are divided into two sub areas: 1) develop, document and maintain industrial processes used on the installation, and 2) establishing the AUL HM list and associated waste streams. Processes will be named, assigned an Identification code and associated with work centers and locations that use the process, equipment required to operate the process, permits required or affected, material used in the processes, end products, and waste streams generated by the process. The AUL HM listing is similar to installation Authorized Stock Lists (ASL), but at a more detailed level. Material is approved at the manufacturer and chemical constituent level using the manufacturer's MSDSs to accurately identify the product. The following provides specific implementation guidance.

Process: Processes identify what and how a material is used, potential exposure risks and what waste streams to expect. Characterizing, or describing, processes that use HM or generate HW is a key element of a strong pollution prevention program and supports Emergency Planning and Community Right to Know Act (EPCRA) compliance reporting. Processes using the Environmental Protection Agency (EPA) Consolidated List of Lists and OSHA 29 CFR 1910 listed chemicals will be described in sufficient detail to support EPCRA reporting if the chemical reaches Threshold Planning Quantities (TPQ).

Under Base Operations Service Number 95, installations will develop algorithms to estimate releases based on process and material usage. Process 'algorithms' predict the fate of materials used in a process and use the information to collect data for the

EPCRA Form R Report and for pollution prevention opportunity assessments. USA Center for Health Promotion and Preventive Medicine (CHPPM) will publish processes and generic algorithms that will be used by installations to develop local processes and local process algorithms. The installation Environmental Office, IH Office and Safety Office work jointly to determine and document local processes and algorithms. Installations will place emphasis on those processes using large quantities of HM, processes using extremely hazardous substances processes generating over 500 pounds of waste and processes most likely using sufficient HM to reach reporting TPQs. Installations review and update processes at least every five years. Minimum information captured includes: process name and identification code, work center and location (building, floor, room), responsible POC information, personnel associated with the process, material approved for use in process, generated waste streams, required personal protective equipment (PPE), required process equipment and/or filtration equipment, permits required to operate or affected by the process, required training, weapon system process will be used on, waste streams generated by the process, process algorithms, and date process last reviewed and approved.

HM Listing: Under Base Operations Service Number 24, installations will establish an electronic list of approved HM. Identification and documentation of approved HM facilitates necessary tracking and EPCRA reporting. HM is approved and tracked at the chemical constituent level, as provided by the most current manufacturer's MSDS, and is linked to the process authorized to use the material. Installations track those materials containing chemicals listed by the EPA (Consolidated List of Lists) and OSHA 29 CFR 1910. When reviewing HM, Committees concentrate on quantity, toxicity and exposure potential of the materials. HM is also approved, ordered, issued and tracked by unit of use. High and low levels of HM stock are established and tracked at the installation level and work center level, as required. This facilitates more efficient usage, less risk to personnel, and useable pollution prevention opportunity assessment information.

HM identification and approval is based on technical manuals (TMs), activity operations, manufacturer's MSDSs and command guidance. HMMP Committees, environmental and safety offices review technical manuals and activity operations to identify required materials and compare them to chemical lists and manufacturer MSDSs to determine which should be considered. A review of these materials is conducted to identify potential less hazardous substitutes, materials and chemicals restricted by command guidance (i.e., ozone depleting substances and 1, 1, 1 trichlorethane). The review process results in an approved AUL HM List. Lists of approved HM are maintained electronically. Only approved materials can be requisitioned, used, or brought on the installation. Installations will ensure that only approved stock numbers are added to activity and unit ASLs and basic loads.

The initial AUL HM list may be created by conducting a formal inventory, identification, review and blanket approval of all HM on an installation during HMMP implementation, with scheduled reviews and re-validations at a future time. Each command, installation, unit or facility records its AUL decisions, insuring that the following minimum information is recorded and maintained. This information is used to track day-to-day transactions and for compliance reporting. Essential tracking data includes: Material. Stock Number, Nomenclature, Unit of Measure (UM), Unit of Issue (UI), Unit of Use (UU), Unit Product Code (UPC), type of container, kit or individual item, applicable alternative units of use, approval status, authorization limits (by installation, work center, person, zone, etc.) Chemical Abstract System (CAS) information for each

chemical. constituent, chemical name and alternative names, hazard category, health category, hazard type, class, physical states, density, source reduction methods, regulatory lists chemical is on, OSHA limits, ACGIH threshold limits, EPA TPQ, OSHA TPQ and Site TPQ, and other hazards (Volatile Organic Compound (VOC), Extremely Hazardous Substance (EHS), HAP, Ozone Depleting Substance (ODS). Approved HM are normally identified in an automated Master Record that establishes a unique combination of a stock number and MSDS. This facilitates tracking chemical inventories on the installation/organization as a transparent by-product of conducting transactions on a material product.

MSDS Record. Under Base Operations Services Number 95, all activities possessing or using HM will ensure that the manufacturer's MSDS is readily available. When a manufacturer's MSDS is not readily available, the installation will query the Defense Hazardous Material Information Reporting System (HMIRS) for a temporary MSDS. If an HMIRS MSDS is not available, a locally generated MSDS based on similar material will be maintained and identified as a generic MSDS pending receipt of the manufacturer's MSDS. The correct manufacturer's MSDSs will be available within 3 working days of material receipt. Exemptions to this requirement are forwarded through IMA HQ to HQDA, ACSIM.

Installations will maintain an electronic MSDS file that contains essential chemical constituent and physical property information for each material used on the installation. This requirement is in addition to the OSHA requirement for using activities to have MSDSs readily accessible to employees. MSDS minimum tracking information includes: MSDS number, trade name, part number, manufacturer and Commercial and Government Entity (CAGE) code, Manufacturer's MSDS number (if available), chemical constituents and percentages, hazards, product state and mixture status, VOC content, specific gravity, volatility by volume and weight, solubility in water, flash point, container and storage information. Other minimum product information includes shelf-life code, reactivity code, and disposition information.

Master Record. Under Base Operations Service Number 24, installations will create a Master Record that establishes a unique combination of a stock number and MSDS. This facilitates tracking chemical inventories on the installation/organization as a transparent by-product of conducting transactions on a material product. Minimum information includes MSDS number, applicable NSN, part number, nomenclature, Unit Priority Code (UPC) code, approval status, and authorization limits (work center, person, zone, etc).

Phase 1 implementation of AUL establishment will include, as a minimum:

1. identify, approve and record all processes on the installation that use HM,
2. obtain MSDS for each hazardous product used on the installation,
3. approve HM at the product level,
4. record approvals at the NSN level,
5. ensure that all ASL HM items have been reviewed and approved, and
6. maintain a list of approved processes and HM (AUL).

Remaining portions of this business practice may be referred to phase 2 which includes the use of automated support.

3.4 Establish central HM control capability within existing supply operations to centrally procure, receive, issue, distribute, store and track HM throughout its material life cycle.

Under Base Operations Service Number 24, installations will establish central HM control points within existing supply operations to centrally procure, receive, issue, distribute, store and track HM on the installation. These points are an integral part of an

established supply operation and are normally referred to as HAZMARTs, HM Control Centers (HMCCs), or other locally determined name. Separate or stovepipe HM supply operations will not be established. The central HM Control Point ensures continuous visibility of HM on the installation and is responsive to customer needs. Standard common levels of support conducted by all HAZMARTS are:

1. Requisition and/or procure authorized HM
2. Receive, verify and uniquely identify authorized HM
3. Store authorized HM in approved storage locations in accordance with established Requisitioning Objective (RO) and Re-Order Point (ROPs)
4. Issue authorized HM to installation activities and tenants
5. Transfer HM to off-site locations
6. Receive, verify and store returned serviceable HM for re-use on a free-issue basis.
7. Record the disposition of issued and stored HM capturing actual use information
8. Record all HM transactions (receipts, issue, disposition, transfer, inventory adjustments) in approved HMMP software.

Local standard levels of service may include HM delivery and pickup, depending upon mission, geography, organization, and resources. HM delivery and pickup improves control, improves shop/lab efficiency, and offers an opportunity to link HM and HW operations, but is not mandatory.

Phase 1 implementation of this business practice, includes, as a minimum:

1. Receive and/or procure authorized installation HM
2. Receive, verify HM against the AUL and mark containers as having been approved for use on the installation.
3. Store authorized HM in approved storage locations in accordance with established RO and ROPs.
4. Transfer HM to off-site locations.
5. Receive, verify and store returned serviceable HM for re-use on a free issue basis. Installations not currently using approved HM tracking software will use MS Excel to record HM re-use transactions.
6. Establish HM recycle capability, where practical.

3.5 Track HM throughout its life cycle on the installation using approved software.

Under Base Operations Service Number 67, Pollution Prevention, installations approve, order, receive, issue and track HM by unit of use and at the chemical constituent level, using approved software. The software supports HMMP implementation and operations by recording installation organizations, work centers, locations, personnel, permits, the AUL information, CAS information, preparing compliance reports and providing sufficient information to support metric, management and pollution prevention opportunity assessments. As HM transactions are recorded, the software validates and verifies against the AUL, updates material and chemical inventory files and updates compliance reporting tables. Tracking of HM from the point of procurement through final disposition is conducted to:

(1) Limit HM brought on the installation to that which is approved.
(2) Maintain a near real-time HM and chemical inventory from time/point of entry to time/point of departure.
(3) Control HM issues to approved activities and trained individuals.
(4) Manage HM shelf life.
(5) Comply with regulatory requirements.
(6) Provide potential exposure information.
(7) Identify training and equipment requirement.

(8) Identify pollution prevention opportunities.
(9) Collect life cycle cost information for program managers.
(10) Provide standard data to support program matrix reporting.

Use of the approved software facilitates these tasks with minimal data entry and manual data processing. Two software applications are currently approved for use on IMA installations: the DoD Hazardous Substance Management System (HSMS) and the Hazardous Material Management System (HMMS).

What To Track: All installations will track HM at the chemical constituent level using manufacturer's MSDSs as the source of chemical constituent information. Electronic MSDSs are usually available via the Internet at the Defense Hazardous Material Information Reporting System (HMIRS), university sites or on compact disks. These sources provide sufficient HM chemical constituent, physical property and handling information. Requests for exemption to tracking HM at the chemical constituent level are forwarded to HQDA, ACSIM.

Installations determine which products to track based on the following guidance.

- At a minimum, all installations will track those products containing chemicals necessary to comply with EPCRA Sections 302, 312 and 313 tracking and reporting, OSHA 29 CFR 1910 requirements and U.S. Army Environmental Center (USAEC) requirements to be determined.
- All installations will track EPA Priority Chemicals, when published.
- Materials with National Fire Protection Agency (NFPA) hazard ratings of 3 or higher.
- Materials with HMIRS hazard ratings of 3 or higher
- Materials determined to be ozone depleting substances (ODS).
- Materials containing polychlorinated biphenyls (PCB)
- Materials containing asbestos
- Materials containing chlorofluorocarbons (CFC)
- Command determined materials and chemicals.

Tracking Points: As a minimum, HM will be tracked at the following points in its life cycle:

- Anticipated receipt (point of ordering). Determine if material on the AUL, personnel trained, or less hazardous material?
- Receipt. Record items received (document number, stock Number, nomenclature, part number, quantity, manufacturer/vendor, MSDS number, container shelf-life, chemical constituents and quantity (ies), expiration date), who/when received, where stored, and is receiving location authorized to receive. Material is bar-coded at this point or is identified as received and bar-coded during issue.
- Issue. Record what and quantity issued (material and chemical constituent), material classification, process issued to, cost center and location being issued to, who issued to, is person trained and has mandatory equipment been issued, container barcode number.
- Return to storage. Record barcode number, quantity returned (product and constituents), from whom, new storage process and location, material classification, and actual quantity (ies) used, lost and/or spilled.
- Re-issue. Same as Issue.
- Transfer between activities. What and how much transferred (product and constituents), what is date/time of transfer, what are losing and gaining processes, what are losing and gaining locations.
- Transfer off-site. What and how much transferred (product and constituents), what are losing process and location, what is gaining address, losing and

gaining POCs, what are date and time of transfer.
- Actual usage. How much product (product and chemical constituent) was actually used by the issued to process, what is date and time of reported usage.
- Recycling. What and how much (NSN and MSDS) was recycled (product and constituent), what was recycling process, how much returned to storage, where returned, what process returned to? Similar to Receipt. Recycling process descriptions should also include related waste streams.
- Disposal. All information needed by Resource Conservation and Recovery Act (RCRA) and supporting Defense Reutilization and Marketing Office. Usually includes container ID, type and size; quantity; chemical constituents by percentage; contract and contract line number, individual and total costs, generator and final disposal location, start date; container close date; container pickup date; transfer dates; and, disposal certification date.

This business practice will be implemented under phase 2 for those installations not currently operating approved HM management software.

3.6 Reduce HM inventory at the user or operator level.

Under Base Operations Service Numbers 24 and 67, installations and all tenant units and activities will establish realistic operating levels of HM at the user and operator level. Reduction of HM inventories improves readiness by reducing capital investment costs (procurement, storage and handling), reducing potential hazards to personnel and reducing shelf-life expiration disposals. This also requires a responsive HAZMART with authority for expedited procurements to meet mission needs. HM reduction should be accomplished down to the user/operator level by reviewing stock and real demand data to ensure only sufficient material for immediate usage or a single job/protocol is on hand. Less hazardous material should be substituted whenever possible. Installations will publish policy precluding the use of Government Purchase Card for HM procurement by all but the HAZMART or through the HAZMART.

Standard Army supply systems can provide demand data, by stock number. The HSMS and HMMS software applications track actual HM usage at the shop or unit level. This information should be used to assess inventories and adjust to the minimum on hand amounts needed to support the mission. Troop installations (all) will review Basic Loads, Operational Loads, ASLs and Unit Basic Loads (UBLs) to determine if HM stock levels can be reduced with minimal impact on readiness. Maintenance activities should eliminate the practice of buying similar products from multiple vendors to reduce handling and management. While in garrison, all activities are directed to obtain HM through the HAZMART(s). HAZMART(s) are directed to provide required material within specified periods of time (just-in-time procurement). This reduces HM storage requirements within units and the HAZMART. Installations will establish recycling capabilities where practical to reduce procurement costs and inventory levels. Sample recycling capabilities are antifreeze, xylene and motor oil.

This business practice will be established in Phase 1.

3.7 Manage and track HM by shelf life to use material for its intended purpose before expiration.

Under Base Operations Support Services Number 24, installations and tenant units and activities will management material shelf life to reduce acquisition and waste processing costs. Installations and tenant units and activities will record and use product shelf-life information to ensure use

or return of products, prior to expiration date. Local practices will include shelf-life verification and recording during receipt and issue, using oldest dates first. HM inventory listings will be periodically reviewed to identify material nearing expiration dates. Expiring HM is issued, examined for shelf-life extension, and/or returned in accordance with Army supply policy. Activities using an automated application will ensure that the container expiration date is on the unique identification label.

This business practice will be established in Phase 1.

3.8 Establish periodic HMMP compliance self-assessments and audits to identify compliance procedure improvements.

Under Base Operations Support Services Number 24 and 67, installations will incorporate HMMP considerations into existing formal and informal audit systems to determine the status of HMMP procedures and regulatory compliance. The intent of this business practice is to incorporate HMMP related inspection points into existing assessment capabilities. The following minimum self-assessments will be conducted:

- Physical inspection of on-hand stocks to verify that HM was issued through the HAZMART (look for barcodes) and that appropriate MSDSs are on hand.
- Periodic reviews of shop and bench stock inventories to ensure stock levels are not excessive and to determine which items can be reduced or replaced by less hazardous materials.
- Periodic verification of on-hand stocks against date of issue. HM should be used within an established period of time, usually two weeks or a specific production period or job order. Items that are not or cannot be used within this period should be returned to the HAZMART for redistribution and use prior to expiration date.
- Periodic reviews of processes to validate process characterization within the AUL database.
- Period comparison of AUL and ASL and basic or deployment loads to ensure that all HM on the ASL have been approved and that all AUL items are on the ASL. This practice also supports identification of potential substitution with less hazardous material.
- Hospitals and research activities will establish specific periodic reviews of their on hand HM by conducting visits to the various wards, clinics and labs.
- Laboratories should review protocols to ensure correct material is on hand and in compliance with the each protocol and AUL.

This business practice will be incorporated into Phase 1.

4 HMMP Metrics.

Under Base Operations Support Services number 67 and 24, installations will conduct daily monitoring of HMMP operations, collect HM and chemical data and prepare the following reports.

Extremely Hazardous Substances. Each installation and OCONUS IMA region prepares a semi-annual report of all chemicals found on the installation that are listed by EPA as extremely hazardous substances (EPCRA Section 302), regardless of threshold status. HQ IMA will provide format and data requirements annually. Minimum data will include chemical name, chemical synonym (if applicable), reportable threshold, total pounds on the installation during that quarter, products containing the chemical, processes the chemical is approved for use in, and whether or not the chemical was added since the last report.

Toxic Chemicals and Hazardous Substance Usage. Each installation and OCONUS IMA Region prepares a semi-annual electronic

report identifying semi-annual usage for all HM and constituent chemicals that are identified on the EPA Priority Chemical List (a subset of the List of Lists). HQ will disseminate the report format and data requirements. Minimum data includes: HM Nomenclature, HM NSN, Unit of Issue quantity, chemical constituent(s) name, CAS number of each constituent, chemical synonym (if applicable) for each constituent, total pound usage of each constituent, number of processes using the HM; and a summation by chemical indicating chemical name, CAS number, pounds, using process(es), and increase or decrease from previous report (include an explanation for increase or decrease). (Meets E.O. 13148 requirements).

Toxic Chemical Release. Form R report. Each installation prepares an annual electronic EPA Form R for each EPA listed chemical that exceeds the established (40 CFR 313) TPQ. EPA publishes annual changes to the report in electronic format. Installations submit the report directly to EPA, with copies through their respective IMA Regions and IMA Headquarters to USAEC. OCONUS IMA Regions are exempted from this report.

Toxic Chemical Listing. Each installation and OCONUS IMA Region prepares a semi-annual report of all chemicals found on the installation that are EPA listed or require OSHA process management, regardless of threshold status. HQ IMA will disseminate report format and data requirements. Minimum data will include: Chemical name, chemical synonym (if applicable), Tier 1 or 2 reportable threshold, total pounds on the installation during that quarter, products containing the chemical, processes the chemical is approved for use in, claimed exemptions, exposure information (to be determined) and whether or not the chemical was added since the last report (meets HMMP analysis and E.O. 13148 compliance requirements).

Hazardous Waste Generation and Disposal Report. Each installation and OCONUS IMA Region prepares a biennial report of HW generated and disposed (tonnage and costs). HQ IMA will disseminate report format and requirements. Minimum data will include waste streams (characterizations), processes generating the waste streams, pounds (per stream, process and total), methods of disposal and costs (per waste stream, process and total) (meets HMMP assessment and E.O. compliance requirements).

Non-regulated HW Disposal Report. Each installation and OCONUS IMA Region prepares an annual report of HW generated and disposed (tonnage and costs). HQ IMA will disseminate report format and requirements. Minimum data will include waste streams (characterizations), processes generating the waste streams, pounds (per stream, process and total), methods of disposal and costs (per waste stream, process, and total) (meets HMMP assessment and E.O. 13148 compliance requirements).

Re-used Material Cost Avoidance Report. Each installation and OCONUS IMA Region prepares an annual report of the amounts of HM that were returned and re-issued (re-use). Minimum data will include NSN, nomenclature, quantity, original HM cost and cost avoidance. Re-use cost avoidance is normally considered to be the current acquisition value of an item that was previously purchased, issued and returned to storage and re-issued on a free basis. The cost of storing the re-use item is not normally considered (meets HMMP assessment and cost avoidance analysis requirements).

Dollar Value of Recycled Material. Each installation and OCONUS IMA Region prepares an annual report of the amounts of HM that were recycled and returned to inventory or returned to use. Minimum data includes NSN, nomenclature, quantity, method of recycling, original HM cost, cost

to recycle, and cost avoidance. Recycle cost avoidance is normally computed by determining the difference between current acquisition value of an item and the cost of recycling and containerizing the HM to meet original serviceability standards or other use. The cost of storing recycled HM for re-issue is not normally included (meets HMMP assessment and cost avoidance analysis requirements).

Reports will be generated using an automated application from data generated during day-to-day transaction reporting. Report formats are provided by HQ IMA (determined by USAEC). Installation personnel run the report and review before forwarding. Reports are primarily annual and require a two to three week effort (total).

Phase 1 metrics will be established by HQ, HQDA and IMA Headquarters and will be disseminated for installation compliance.